

National Ambient Air Quality Standards for Particulate Matter

Trash Burning Workgroup
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NAAQS Overview

- National Ambient Air Quality Standards
 - Federal standards designed to protect health and welfare
 - Primary standards are protective of human health
 - Secondary standards are protective of welfare
 - Six Criteria Pollutants:

Particulate Matter (2.5 and 10 microns)	Ozone
Sulfur dioxide	Nitrogen dioxide
Carbon monoxide	Lead

Old PM Standards

PM2.5

- Three year average of annual 98th percentile of daily values < 65 $\mu\text{g}/\text{m}^3$
- Three year average of annual averages < 15 $\mu\text{g}/\text{m}^3$

PM10

- Three year average annual exceedances ($>150 \mu\text{g}/\text{m}^3$) ≤ 1
- Three year average of annual averages < 15 $\mu\text{g}/\text{m}^3$

New PM Standards

PM2.5

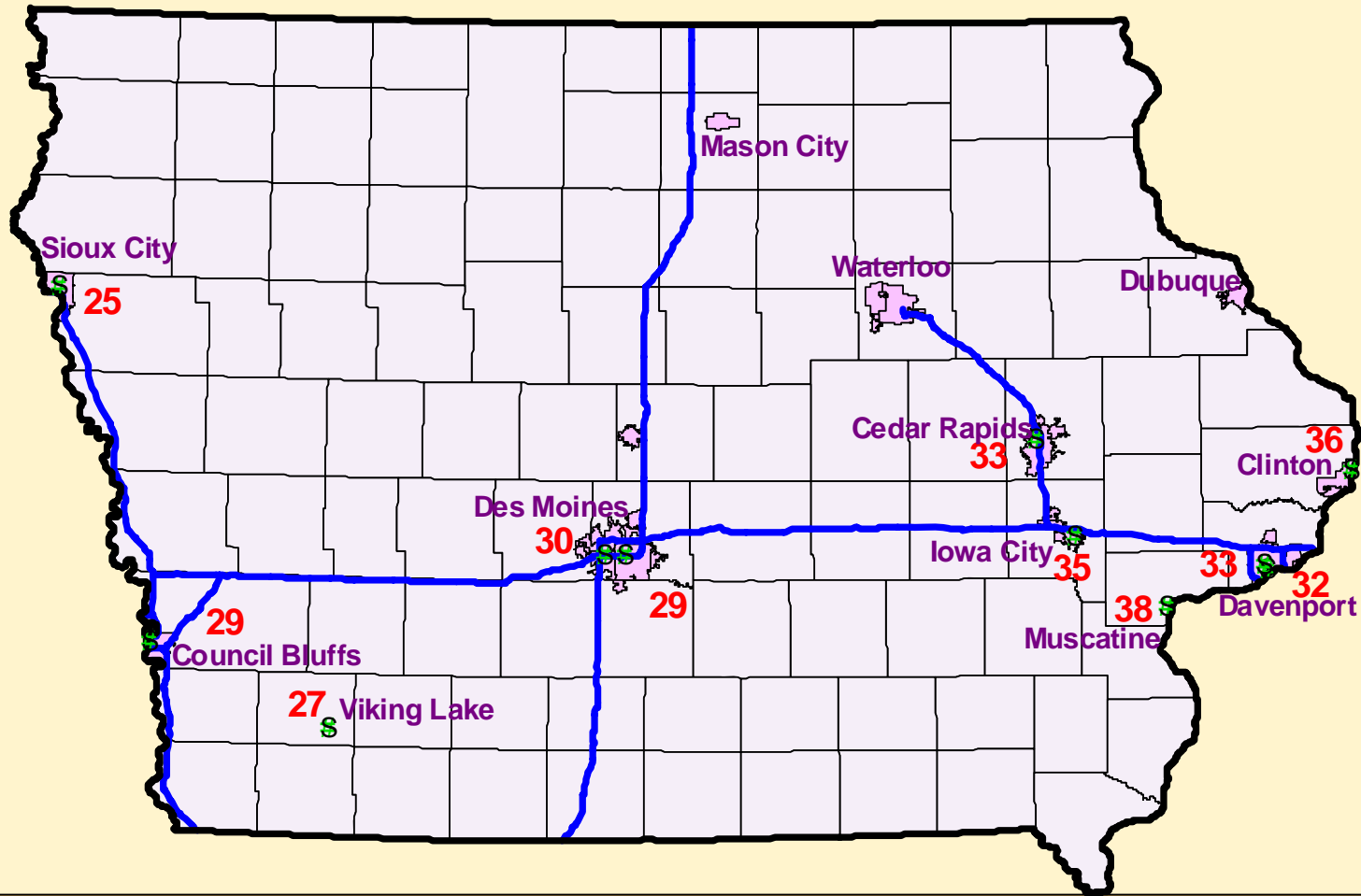
- 24-hour standard lowered from $65 \mu\text{g}/\text{m}^3$ to $35 \mu\text{g}/\text{m}^3$
- Annual standard retained

PM10

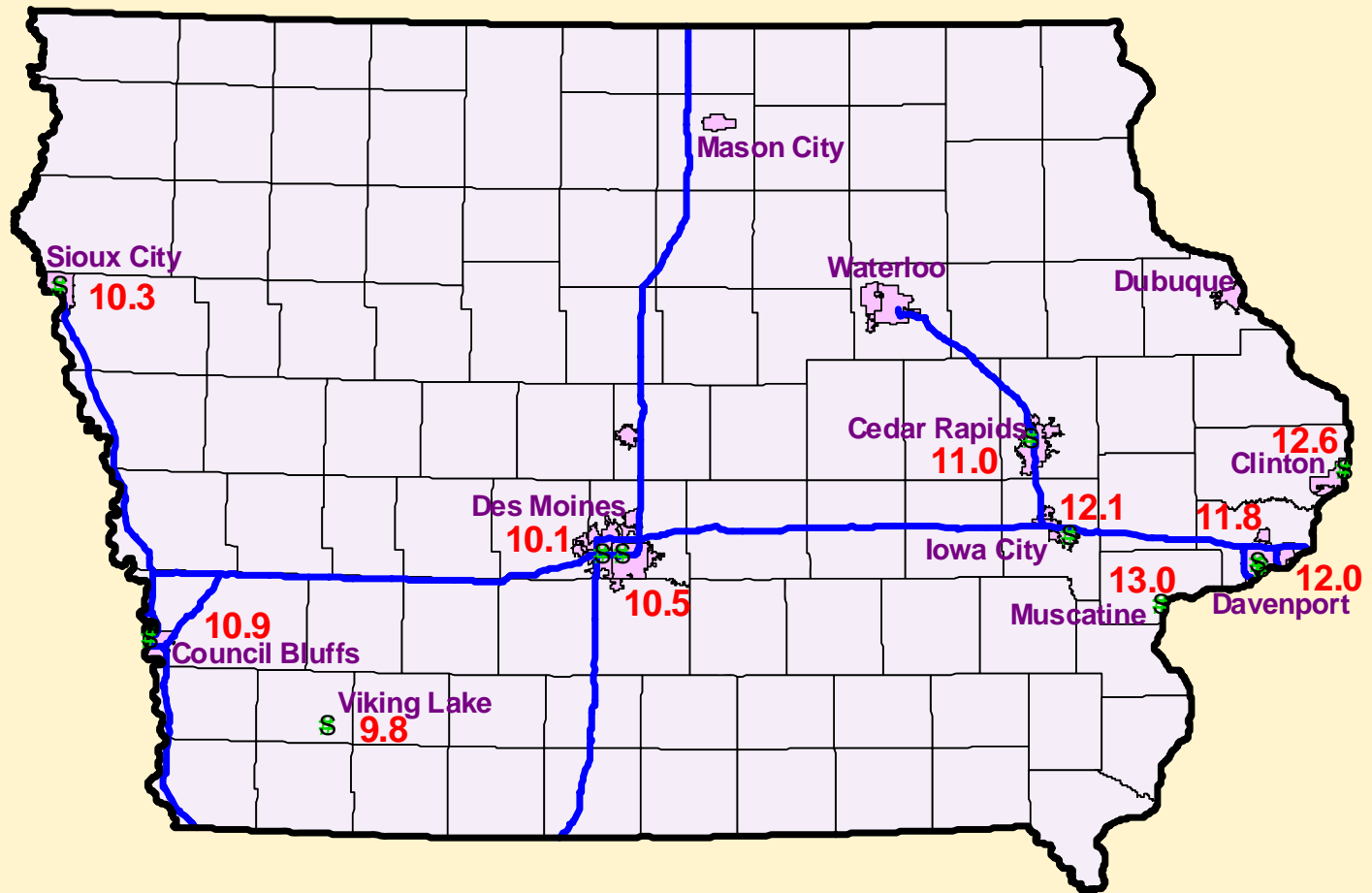
- 24-hour PM10 standard retained
- Annual PM10 standard revoked

See EPA[1] for rule text.

PM2.5 24-hour Design Values 2003-2005 (NAAQS is exceeded at 35.5 $\mu\text{g}/\text{m}^3$)



PM2.5 Annual Design Values 2003-2005 (NAAQS is exceeded at $15.05 \mu\text{g}/\text{m}^3$)



Implementation Timelines

Milestone	1997 PM _{2.5} Primary NAAQS	2006 PM _{2.5} Primary NAAQS
Promulgation of Standard	July 1997	Sept. 2006
State Recommendations to EPA	Feb. 2004 (based on 2001-2003 monitoring data)	Dec. 2007 (based on 2004-2006 monitoring data)
Final Designations Signature	Dec. 2004	Dec. 2009
Effective Date of Designations	April 2005	April 2010
SIPs Due	April 2008	April 2013
Attainment Date	April 2010 (based on 2007-2009 monitoring data)	April 2015 (based on 2012-2014 monitoring data)
Attainment Date with Extension	Up to April 2015	April 2020

Acknowledgement:
EPA [2]

Regulatory Implications

- Potential Future PM2.5 Non-attainment in Iowa
 - Must attain as expeditiously as practicable but no later than...
 - Adopt rules to implement reasonably available control technologies and measures (RACT/RACM). RACM could include:
 - New open burning rules or measures
 - Smoke management plans
 - Programs to reduce emissions from woodstoves, fireplaces
 - Non-attainment New Source Review (NSR) –
 - Lowest Achievable Emission Rate (LAER) technology
 - Emission offset requirements

Summary

- Monitoring sites in Eastern Iowa are close to the new 24-hour PM_{2.5} NAAQS.
- Little “urban excess” is noted between population-oriented monitoring sites in larger urban areas and nearby monitors in smaller communities or rural areas.
- Extent of non-attainment areas and PM_{2.5} implementation considerations are still uncertain.

Web Resources

EPA[1]: <http://epa.gov/pm/actions.htm>

EPA[2]: http://epa.gov/pm/pdfs/20061013_presentation.pdf

Questions?

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